

Linzer biol. Beitr.	44/2	1221-1235	28.12.2012
---------------------	------	-----------	------------

Catalogue and faunistics of the family Leucospidae (Hymenoptera: Chalcidoidea) of the Ethiopian region excluding Malagasy subregion

M. MADL & M. SCHWARZ

A b s t r a c t : In the Ethiopian region excluding Malagasy subregion the family Leucospidae is represented by 29 species in three genera: *Leucospis* FABRICIUS 1775 (17 species), *Micrapion* KRIECHBAUMER 1894 (11 species) and *Neleucospis* BOUČEK 1974 (one species). The species of the Ethiopian region excluding Malagasy subregion are catalogued. In addition the data of the material preserved in the Biologiezentrum der Oberösterreichischen Landesmuseen in Linz (Austria) are listed. This material belongs to seven species of *Leucospis* FABRICIUS and five species of *Micrapion* KRIECHBAUMER. Records are dealt with from following countries: Benin, Central African Republic, Ethiopia, Kenya, Malawi, Mozambique, Namibia, Nigeria, Republic of Guinea, South Africa, Tanzania, Zambia, Zimbabwe.

Key words : Leucospidae, *Leucospis*, *Micrapion*, *Neleucospis*, catalogue, new records, Ethiopian region.

Introduction

Since the fundamental revision of BOUČEK (1974), who recorded 29 species from the Ethiopian region excluding Malagasy subregion, only few papers on African Leucospidae have been published. MEDLER (1980) catalogued the Nigerian species and RASPLUS (1987) reviewed the species of Ivory Coast including descriptions of the males of *Leucospis reversa* BOUČEK and *Neleucospis masculina* BOUČEK 1974. The papers of GESS (1981), RASPLUS (1987), DALY (1988) and WEAVING (1994a, b, 1995) contain host records.

The biology of the African species is not well known. Solitary bees (Apidae and Megachilidae) and solitary wasps (Eumeninae (Vespidae), Pompilidae, Crabronidae and Sphecidae) are known as hosts.

This paper is based on the material of the Biologiezentrum der Oberösterreichischen Landesmuseen in Linz (Austria). It contains seven species of the genus *Leucospis* FABRICIUS 1775 and five species of the genus *Micrapion* KRIECHBAUMER 1894. Records are dealt with from following countries: Benin, Central African Republic, Ethiopia, Kenya, Malawi, Mozambique, Namibia, Nigeria, Republic of Guinea, South Africa, Tanzania, Zambia, Zimbabwe. Voucher specimens of following species are deposited in

the Naturhistorisches Museum in Vienna (Austria): *Leucospis africana* CAMERON 1907(South Africa), *Leucospis carinifera* KRIECHBAUMER 1894 (Malawi, Zimbabwe), *Leucospis ornata* WESTWOOD 1839 (Nigeria, South Africa), *Leucospis tricolor* KIRBY 1883 (Central African Republic, Kenya), *Leucospis varicollis* CAMERON 1909 (Ethiopia, Nigeria), *Micrapion dalyi* BOUČEK (Namibia), *Micrapion biimpressum* BOUČEK 1974 (Central African Republic), *Micrapion bilineatum* KRIECHBAUMER 1894 (South Africa), *Micrapion clavaforme* STEFFAN 1948 (Benin, Zimbabwe).

Abbreviations

biol. biology
cat. catalogue
distr. distribution
ed. editor
fig. (figs) figure (figures)
pl. (pls) plate (plates)
syn. synonym
tab. table
tax. taxonomy
type design. type designation
typ. gen. typus generis

Annotated catalogue and material

The catalogue is organized alphabetically. Synonyms, misidentifications and identifications to generic level are marked with an asterisk (*). The Ethiopian region is restricted to the political borderline of African countries excluding the countries bordering the Mediterranean Sea and former Spanish Sahara. The island of Socotra, a part of Yemen, faunistally belongs to the Ethiopian region. There are no records of Leucospidae from the Mid-atlantic Ocean islands of Saint Helena and Ascension.

Genus *Leucospis* FABRICIUS 1775

Description: FABRICIUS 1775: 361.

Typus generis: *Leucospis dorsigera* FABRICIUS 1775.

Distribution: All zoogeographical regions.

Valid species in the Ethiopian region: 17.

Leucospis africana CAMERON 1907

Leucospis africana sp.nov.: CAMERON 1907: 204 (descr. ♀, South Africa).

Leucospis africana CAMERON 1907: WELD 1922: 37 (cat.).

Leucospis africana CAMERON 1907: BOUČEK 1974: 102 (key), 105 (figs 123-126, only fig. 126: Democratic Republic of Congo, Lesotho, Nigeria, South Africa), 106 (tax., type design., descr. ♂, biol., Burundi, Central African Republic, Democratic Republic of Congo, Eritrea, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mozambique, Nigeria, South Africa, Tanzania, Uganda, Zambia, Zimbabwe), 231 (host-parasite cat.).

Leucospis africana CAMERON 1907: MEDLER 1980: 458 (cat. Nigeria).

Leucospis africana CAMERON 1907: RASPLUS 1987: 173 (tax., biol., Ivory Coast).

Leucospis africana CAMERON 1907: GESS 1981: 33 (biol., South Africa).

Hosts: Megachilidae: *Megachile spinarum* COCKERELL 1937 (GESS 1981: 33), *Serapista denticulata* (SMITH 1854) (BOUČEK 1974: 108).

Distribution: Burundi, Central African Republic, Democratic Republic of Congo, Eritrea, Ethiopia, Ghana, Ivory Coast, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, South Africa, Tanzania, Uganda, Zambia, Zimbabwe.

Material examined: Central African Republic: 80 km N Kembe (04°29'N/21°53'E) 1 ♀ 16.07.1985 leg. H. Dollfuss – 70 km NNE Bangui, 445 m (04°57'N/18°46'E) 1 ♀ 24.-28.11.2010 leg. J. Halada – Kenya: Voi, Tsavo 1 ♀ 22.11.-02.12.1996 leg. Mi. Halada – Taita Hills, Wundanyi 1 ♂ 05.-10.04.1997 leg. Ma. Halada – Malawi: 85 km SE Lilongwe, Dedza 1 ♀ 17.-19.12.2001 leg. J. Halada – Mozambique: Prov. Manicada, 70 km SE Chimoio 1 ♀ 23.-24.12.2003 leg. J. Halada – Namibia: Rundu 1 ♂ 19.01.1993, 1 ♀ 20.01.1993, 1 ♂ 1 ♀ 22.01.1993, 1 ♀ 23.01.1993 leg. J. Gusenleitner – Nigeria: Gashaka Gumfi National Park, 30 km SE Serti, 450 m (07°21'N/11°32'E) 1 ♀ 24.04.-08.05.2011 leg. J. Halada – South Africa: Mpumalanga, Waterval-Boven, Elans River 1 ♀ 18.01.2000 leg. J. Halada – Western Cape, Klein-Karoo, Ladismith 1 ♀ 25.10.1999 leg. M. Halada – Western Cape, Klein-Karoo, Barrydale 1 ♀ 16.12.2002 leg. Ma. Halada – Western Cape, Klein-Karoo, Langberg, Grot River 1 ♀ 15.12.2002 leg. Ma. Halada – Western Cape, Mossel Bay, Route, Herbertsdale – Langberg 1 ♂ 1 ♀ 19.01.2001 leg. M. Snižek – Western Cape, Ashton (Robertson) 2 ♂ ♂ 26.10.1999 leg. Ma. Halada – Western Cape, E Clanwilliam 1 ♂ 10.10.1999 leg. M. Halada – Orange Free State, N Ficksburg, R. 70 1 ♀ 17.01.2003 leg. M. Snižek – Tanzania: Mombo 1 ♀ 09.-11.01.1996 leg. M. Snižek – 25 km SE Kasulu, 1200 m (04°44'S/30°11'E) 1 ♀ 28.12.2006 leg. J. Halada – Province Mbeya, Mbeya 1 ♂ 05.01.2007 leg. J. Halada – 35 km NE Mbeya, 1150 m (08°46'S/33°41'E) 1 ♂ 04.01.2007 leg. J. Halada – Zambia: 40 km SSW Solwezi 1 ♀ 08.12.2004 leg. M. Snižek & Tichý – 27 km E Solwezi 1 ♀ 08.11.2005 leg. M. Snižek – 60 km W Solwezi 1 ♀ 04.-06.01.2003 leg. J. Halada – 45 km SE Kilwa 1 ♀ 12.-15.01.2003 leg. J. Halada – Mansa, Lake Bangweulu 1 ♀ 18.11.2004 leg. M. Snižek – Zimbabwe: 30 km W Harare 1 ♀ 29.11.1999 leg. Ma. Halada – 25 km NE Sanva, Nyagui River (Bindura) 1 ♀ 15.12.1998 leg. J. Halada – 40 km S Chipinge, Mount Selinda 3 ♂ ♂ 13.12.1998 leg. M. Halada – Chimanimani, Nature Park 1 ♂ 14.12.1998 leg. S. Bečvář, 2 ♂ ♂ 14.12.1998 leg. M. Halada – Mavhuradonha Saf. A., 15 km SE Muzarabani 1 ♂ 17.12.1998 leg. M. Halada.

New record for the the fauna of Namibia. *Leucospis africana* CAMERON is not mentioned in SCHMIEDEKNECHT (1909). *Megachile spinarum* COCKERELL and *Serapista denticulata* (SMITH) are not mentioned as parasitoids in EARDLEY & URBAN (2010: 331, 249).

***Leucospis carinifera* KRIECHBAUMER 1894 (fig. 1)**

Leucospis (?) *carinifera* nov.sp.: KRIECHBAUMER 1894: 298 (cat. as *Leucopsis carinifera*), 314 (descr. ♂, Mozambique (not South Africa)).

Leucospis carinifera KRIECHBAUMER 1894: DE DALLA TORRE 1898: 407 (cat.).

Leucospis carinifera KRIECHBAUMER 1894: SCHMIEDEKNECHT 1909: 15 (cat.).

Leucospis carinifera KRIECHBAUMER 1894: BOUČEK 1974: 103 (key), 106 (tax.), 107 (figs 134, 135), 106 (tax.), 119 (tax., type design., Djibouti, Ethiopia, Kenya, Malawi, Mozambique, Namibia, South Africa, Sudan, Zimbabwe).

**Leucospis ornata* KLUG mss., n.sp.: WESTWOOD 1839: 252 (South Africa partim).

Distribution: Djibouti, Ethiopia, Kenya, Malawi, Mozambique, Namibia, South Africa, Sudan, Tanzania, Zimbabwe.

Material examined: Kenya: Mwingi, Kangonde vadi 1 ♀ 18.04.2007 leg. M. Halada – Voi, Tsavo 2 ♂ ♂ 22.11.-02.12.1996 leg. Mi. Halada; 1 ♂ 22.11.-02.12.1996 leg. M. Snižek – Taerda cams, Tana River (02°16'S/40°13'E) 1 ♀ 13.04.2006 leg. E. Jendek – Malawi: 85 km SE Lilongwe, Dedza 1 ♀ 17.-19.12.2001, 1 ♀ 05.-12.01.2002 leg. J. Halada – South Africa: Pretoria, 5 km S Brits 1 ♀ 20.01.2000 leg. J. Halada – Orange Free State, 30 km N Colesberg, Orange River 1 ♀ 25.11.2002 leg. M. Halada – Tanzania: Province Dodoma, 35 km N Dodoma, 1100 m (05°54'S/35°45'E) 1 ♂ 14.12.2006 leg. J. Halada – Zimbabwe: Ngezi Recreation Park, Kwekwe

1 ♀ 01.12.1998 leg. J. Halada – 25 km NE Samva, Nyagui River (Bindura) 1 ♀ 15.12.1998 leg. J. Halada – Mushandike, Masvingo 3 ♂ 10.12.1998 leg. J. Halada – Mount Selinda 1 ♂ 12.12.1998 leg. J. Halada.

New record for the fauna of Tanzania.

***Leucospis elegans* KLUG 1834**

Leucospis elegans KLUG 1834: BOUČEK 1974: 103 (key), 105 (figs 130, 131), 106 (tax.), 106 (tax.), 107 (figs 132, 133), 114 (tax., descr. ♂, Sudan).

D i s t r i b u t i o n : Sudan.

Leucospis elegans KLUG is known also from the Palearctic region.

***Leucospis fallax* BOUČEK 1974**

Leucospis fallax sp.n.: BOUČEK 1974: 102 (key), 105 (figs 127-129), 106 (tax.), 110 (descr. ♀, Zimbabwe).

D i s t r i b u t i o n : Zimbabwe.

***Leucospis fülleborniana* ENDERLEIN 1902**

Leucospis fülleborniana nov.spec.: ENDERLEIN 1902: 17 (descr. ♀, Tanzania), 18 (fig. 4).

Leucospis fülleborniana ENDERLEIN 1902: WELD 1922: 37 (cat.).

Leucospis fülleborniana ENDERLEIN 1902: BOUČEK 1974: 104 (key), 111 (fig. 159), 113 (fig. 160), 134 (tax., type design., descr. ♂, Lesotho, Mozambique, South Africa, Tanzania, Uganda).

Leucospis fülleborniana ENDERLEIN 1902: WEAVING 1995: 196 (tab. 9: biol., South Africa), 201 (tab. 13: biol., South Africa).

Leucospis fülleborniana ENDERLEIN 1902: DARLING & CARDINAL 2005: 53 (fig. 3: tax.).

H o s t : Sphecidae *Isodontia pelopoeiformis* (DAHLBOM 1845) (WEAVING 1995: 196, 201).

D i s t r i b u t i o n : Lesotho, Mozambique, South Africa, Tanzania, Uganda.

Leucospis fülleborniana ENDERLEIN is not mentioned in SCHMIEDEKNECHT (1909).

***Leucospis incarnata* WESTWOOD 1839**

Leucospis incarnata KLUG mss., n.sp.: WESTWOOD 1839: 248 (descr. ♀, South Africa).

Leucospis incarnata WESTWOOD 1839: SCHLETTERER 1890: 157 (tax.), 168 (key), 212 (tax., type design., descr. ♀, South Africa).

Leucospis incarnata WESTWOOD 1839: DE DALLA TORRE 1898: 411 (cat.).

Leucospis incarnata WESTWOOD 1839: SCHMIEDEKNECHT 1909: 16 (cat.).

Leucospis incarnata WESTWOOD 1839: BOUČEK 1974: 104 (key), 111 (fig. 157), 132 (tax.), 133 (tax., South Africa).

D i s t r i b u t i o n : South Africa.

***Leucospis insularis* KIRBY 1900**

Leucospis insularis new species: KIRBY 1900: 13 (descr. ♀, Sokotra).

Leucospis insularis KIRBY 1900: KIRBY 1903: 236 (tax., descr. ♀, Socotra), pl. 15 (fig. 1).

Leucospis insularis KIRBY 1900: KOHL 1906: 285 (Socotra).

Leucospis insularis KIRBY 1900: WELD 1922: 37 (cat.).

Leucospis insularis KIRBY 1900: BOUČEK 1974: 102 (key), 105 (figs 121, 122), 106 (tax., Socotra).

D i s t r i b u t i o n : Socotra.

Leucospis insularis KIRBY is not mentioned in SCHMIEDEKNECHT (1909).

***Leucospis namibica* BOUČEK 1974**

Leucospis namibica sp.n.: BOUČEK 1974: 104 (key), 113 (figs 165-168), 138 (descr. ♂ ♀, Namibia).

Leucospis namibica BOUČEK 1974: DARLING & CARDINAL 2005: 57 (tax.).

D i s t r i b u t i o n : Namibia.

***Leucospis obsoleta* KLUG 1834**

Leucospis obsoleta n.sp.: KLUG 1834: pl. 37 (fig. 5) (descr. ♀, Sudan).

Leucospis obsoleta KLUG 1834: WESTWOOD 1839: 240 (tax., descr. ♀, Sudan).

Leucospis obsoleta KLUG 1834: SCHLETTERER 1890: 155 (tax.), 168 (key), 215 (tax., descr. ♀, Sudan).

Leucospis obsoleta KLUG 1834: DE DALLA TORRE 1898: 413 (cat.).

Leucospis obsoleta KLUG 1834: SCHMIEDEKNECHT 1909: 16 (cat. (Sudan (not Arabia))).

Leucospis obsoleta KLUG 1834: BOUČEK 1959: 436 (key), 437 (fig. 9), 442 (tax., Sudan).

Leucospis obsoleta KLUG 1834: BOUČEK 1974: 102 (key), 115 (fig. 174), 142 (tax.), 147 (tax., descr. ♀, Sudan).

D i s t r i b u t i o n : Sudan.

Leucospis obsoleta KLUG could be an aberrant variation of *Leucospis dorsigera* FABRICIUS 1775 (BOUČEK 1974: 147).

***Leucospis ornata* WESTWOOD 1839**

Leucospis ornata KLUG mss., n.sp.: WESTWOOD 1839: 252 (descr. ♀, South Africa partim).

Leucospis ornata WESTWOOD 1839: WALKER 1871: 56 (tax.).

Leucospis ornata WESTWOOD 1839: SCHLETTERER 1890: 154 (tax.), 155 (tax.), 159 (tax.), 166 (key), 219 (tax., descr. ♀, South Africa).

Leucospis ornata WESTWOOD 1839: DE DALLA TORRE 1898: 413 (cat. partim).

Leucospis ornata WESTWOOD 1839: CAMERON 1907: 204 (tax., South Africa).

Leucospis ornata WESTWOOD 1839: SCHMIEDEKNECHT 1909: 16 (cat.).

Leucospis ornata WESTWOOD 1839: BOUČEK 1974: 103 (key), 106 (tax.), 116 (tax., type design., descr. ♂, biol., Central African Republic, Democratic Republic of Congo, Equatorial Guinea (Bioko), Gabon, Ghana, Guinea Bissau, Kenya, Liberia, Malawi, Namibia, Nigeria, Sierra Leone, Sudan, Zimbabwe), 231 (host-parasite cat.).

Leucospis ornata WESTWOOD 1839: MEDLER 1980: 458 (cat. Nigeria).

Leucospis ornata WESTWOOD 1839: RASPLUS 1987: 173 (tax., biol., Ivory Coast).

Leucospis ornata WESTWOOD 1839: WEAVING 1994b: 192 (biol., South Africa).

Leucospis ornata WESTWOOD 1839: WEAVING 1995: 201 (tab. 13: biol., South Africa).

**Leucospis tricarinata* n.sp.: SCHLETTERER 1890: 155 (tax.), 165 (key), 221 (descr. ♀, Democratic Republic of Congo).

Leucospis tricarinata n.sp.: SCHLETTERER 1891: (descr. ♀, Democratic Republic of Congo).

Leucospis tricarinata SCHLETTERER 1890: DE DALLA TORRE 1898: 414 (cat.).

Leucospis tricarinata SCHLETTERER 1890: SCHULZ 1906: 272 (distr.), 295 (tax., Bioko).

Leucospis tricarinata SCHLETTERER 1890: SCHMIEDEKNECHT 1909: 17 (cat.).

Leucospis tricarinata SCHLETTERER 1890: BOUČEK 1974: 116 (syn.).

Hosts: Vespidae: *Tricarinodynerus guerinii* (DE SAUSSURE 1853) (WEAVING 1994b: 192) – Megachilidae: *Lithurgus sparganotes* (SCHLETTERER 1891) (RASPLUS 1987: 173), *Lithurgus spiniferus* CAMERON 1905 (as *Lithurgus capensis* FRIESE 1905) (BOUČEK 1974: 118), *Megachile willowmorensis* BRAUNS 1926 (BOUČEK 1974: 118).

Distribution: Central African Republic, Democratic Republic of Congo, Equatorial Guinea (Bioko), Gabon, Ghana, Guinea Bissau, Ivory Coast, Kenya, Liberia, Malawi, Namibia, Nigeria, Sierra Leone, South Africa, Sudan, Tanzania, Zimbabwe.

Material examined: Kenya: Nguni, N Ngomeni 1♂ 27.04.2007 leg. M. Snižek – Malawi: Nikhotakota, Lake Malawi 1♀ 02.01.2002 leg. J. Halada – Nigeria: Gashaka Gumfi National Park, 30 km SE Serti, 450 m (07°21'N/11°32'E) 1♀ 24.04.–08.05.2011 leg. J. Halada – South Africa: Western Cape, S Lamberts Bay 1♂ 07.–09.10.1999 leg. M. Halada; 1♂ 07.10.1999 leg. Ma. Halada – Western Cape, SW Klein-Karoo, Groot River 1♂ 25.10.1999 leg. M. Halada – Western Cape, Klein-Karoo, Grot River, Langberg 4♂♂ 24.11.2002 leg. Ma. Halada – Tanzania: Province Dodoma, 35 km N Dodoma, 1100 m (05°54'S/35°45'E) 1♀ 14.12.2006 leg. J. Halada – Province Dodoma, 35 km N Kondoa, 1570 m (04°36'S/35°46') 1♀ 19.12.2006 leg. J. Halada.

New record for the fauna of Tanzania. The host record from a "carpenter bee" (BOUČEK 1974: 118) is probably a misidentification (BOUČEK 1974: 117). *Lithurgus sparganotes* (SCHLETTERER), *Lithurgus spiniferus* CAMERON and *Megachile willowmorensis* BRAUNS are not mentioned as parasitoids in EARDLEY & URBAN (2010: 200, 200, 336).

***Leucospis osmia* BOUČEK 1974**

Leucospis osmia sp.n.: BOUČEK 1974: 103 (key), 106 (tax.), 109 (figs 142, 143), 121 (descr. ♀, biol., South Africa), 231 (host-parasite cat.).

**Leucospis* sp.: BRAUNS 1926: 208 (biol., South Africa).

Host: Megachilidae: *Othinosmia globicola* (STADELMANN 1892) (BRAUNS 1926: 208; BOUČEK 1974: 122).

Distribution: South Africa.

Othinosmia globicola (STADELMANN) is not mentioned as parasitoid in EARDLEY & URBAN (2010: 217).

***Leucospis parvula* BOUČEK 1974**

Leucospis parvula sp.n.: BOUČEK 1974: 104 (key), 109 (figs 144-148), 124 (tax.), 125 (descr. ♂ ♀, Democratic Republic of Congo, Gabon, Nigeria).

Distribution: Democratic Republic of Congo, Gabon, Nigeria.

***Leucospis reversa* BOUČEK 1974 (fig. 2)**

Leucospis reversa sp.n.: BOUČEK 1974: 104 (key), 113 (fig. 161), 134 (tax.), 135 (descr. ♀, biol., Democratic Republic of Congo, Gabon (not Republic of Congo), Liberia), 231 (host-parasite cat.).

Leucospis reversa BOUČEK 1974: RASPLUS 1987: 172 (tax., descr. ♂, biol., Ivory Coast), 174 (fig. 1).

Hosts: Apidae: *Xylocopa* sp. (BOUČEK 1974: 136) – Sphecidae: *Sceliphron* sp. (RASPLUS 1987: 173).

Distribution: Democratic Republic of Congo, Gabon, Ivory Coast, Liberia, Republic of Guinea.

Material examined: Republic of Guinea: Monts Nimba, Lola (07°41'N/08°24'E) 1 ♀ 08.07.2004 leg. Ma. Halada.

New record for the fauna of the Republic of Guinea.

***Leucospis rostrata* BOUČEK 1974**

Leucospis rostrata sp.n.: BOUČEK 1974: 106 (key), 111 (figs 154-156), 124 (tax.), 129 (descr. ♂ ♀, Namibia, South Africa).

Distribution: Namibia, South Africa.

***Leucospis schlettereri* DE SCHULTHESS-SCHINDLER 1899**

Leucospis schlettereri nov.spec.: DE SCHULTHESS-SCHINDLER 1899: 250 (descr. ♀, Mozambique), 11 (cat. Mozambique).

Leucospis schlettereri DE SCHULTHESS-SCHINDLER 1899: WELD 1922: 38 (cat.).

Leucospis schlettereri DE SCHULTHESS-SCHINDLER 1899: BOUČEK 1974: 104 (key), 109 (fig. 149), 124 (tax.), 131 (tax., type design., Lesotho, Mozambique, Namibia, South Africa, Zimbabwe).

Distribution: Lesotho, Mozambique, Namibia, South Africa, Zimbabwe.

Material examined: South Africa: North West Province, Klerksdorp 1 ♂ 11.01.2003 leg. M. Snižek – Maputoland, SW Emanguzi 1 ♀ 29.01.2003 leg. M. Snižek.

Leucospis schlettereri DE SCHULTHESS-SCHINDLER is not mentioned in SCHMIEDEKNECHT (1909).

***Leucospis tricolor* KIRBY 1883 (fig. 3)**

Leucospis tricolor n.sp.: KIRBY 1883: 69 (descr. ♂, biol., South Africa).

Leucospis tricolor KIRBY 1883: SCHLETTERER 1890: 161 (biol.), 221 (tax., footnote: descr. ♂, biol., South Africa).

Leucospis tricolor KIRBY 1883: DE DALLA TORRE 1898: 414 (cat.).

Leucospis tricolor KIRBY 1883: SCHMIEDEKNECHT 1909: 17 (cat.).

Leucospis tricolor KIRBY 1883: BOUČEK 1974: 106 (key), 109 (fig. 150), 111 (figs 151-153), 124 (tax.), 126 (tax., biol., "Congo", Democratic Republic of Congo, Eritrea, Ethiopia, Mozambique, Nigeria, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania (Tanzania, Zanzibar), Uganda, Zambia, Zimbabwe), 231 (host-parasite cat.).

Leucospis tricolor KIRBY 1883: MEDLER 1980: 458 (cat. Nigeria).

Hosts: Megachilidae: *Pachyanthidium bicolor* (LEPELETIER DE SAINT-FARGEAU 1841) (BOUČEK 1974: 128), *Pachyanthidium cordatum* (SMITH 1854) (KIRBY 1883: 69), *Pseudanthidium truncatum* (SMITH 1854) (BOUČEK 1974: 128), *Serapista denticulata* (SMITH 1854) (BOUČEK 1974: 128, 129).

Distribution: Central African Republic, "Congo", Democratic Republic of Congo, Eritrea, Ethiopia, Kenya, Mozambique, Nigeria, Senegal, Sierra Leone, Somalia, South Africa, Sudan, Tanzania (Tanzania, Zanzibar), Uganda, Zambia, Zimbabwe.

Material examined: Central African Republic: 60 km SE Bouar, 860 m (05°42'N/ 16°E) 2 ♂♂ 30.03.2010 leg. J. Halada – Kenya: E Garsen, W Witu 1 ♂ 07.12.2007 leg. M. Snižek – near Mwingi 1 ♂ 07.04.2007 leg. J. Halada – Mozambique: Province Manica, 65 km W Chimoio 1 ♀ 10.-11.12.2003 leg. J. Halada – South Africa: 35 km N Port Edward, 450 m (30°45'S/30°09'E) 1 ♂ 1 ♀ 28.12.2008 leg. J. Halada.

New record for the fauna of Central African Republic and Kenya. *Pachyanthidium bicolor* (LEPELETIER DE SAINT-FARGEAU), *Pachyanthidium cordatum* (SMITH),

Pseudanthidium truncatum (SMITH) and *Serapista denticulata* (SMITH) are not mentioned as parasitoids in EARDLEY & URBAN (2010: 243, 243, 248, 249).

***Leucospis varicollis* CAMERON 1909 (fig. 4)**

Leucospis varicollis CAMERON 1909: 421 (descr. ♂, without locality).

Leucospis varicollis CAMERON 1909: BOUČEK 1974: 103 (key), 106 (tax.), 107 (figs 138, 139), 109 (figs 140, 141), 120 (tax., type design., biol., Central African Republic, Democratic Republic of Congo, Kenya, South Africa, Tanzania, Zambia, Zimbabwe), 231 (host-parasite cat.).

Leucospis varicollis CAMERON 1909: WEAVING 1994a: 147 (biol., South Africa).

Leucospis varicollis CAMERON 1909: WEAVING 1994b: 192 (biol., South Africa).

Leucospis varicollis CAMERON 1909: WEAVING 1995: 196 (tab. 9: biol., South Africa), 201 (tab. 13: biol., South Africa).

H o s t s : Pompilidae: *Auplopus vitripennis* (SMITH 1855) (WEAVING 1994a: 147; 1995: 196, 201) – Megachilidae: *Lithurgus spiniferus* CAMERON 1905 (as *Lithurgus capensis* FRIESE 1905) (BOUČEK 1974: 121).

D i s t r i b u t i o n : Central African Republic, Democratic Republic of Congo, Ethiopia, Kenya, Nigeria, South Africa, Tanzania, Zambia, Zimbabwe.

M a t e r i a l e x a m i n e d : Ethiopia: Province Ilubabor, 15 km SW Bedele, 2000 m 4♀ 05.04.2007 leg. J. Halada – Province Sidamo, near Bitata, 1480 m 1♂ 27.04.2007 leg. J. Halada – Kenya: Mwingi, Kangonde vadi 1♀ 18.04.2007 leg. M. Halada – Voi, Tsavo 1♂ 1♀ 22.11.-02.12.1996 leg. M. Halada, 1♂ 23.03.-04.04.1997 leg. M. Halada – Nigeria: Gashaka Gumfi National Park, 25 km SW Serti, 400 m (07°20'N/11°13'E) 1♂ 1♀ 9.-13.5.2011, 2♂♂ 13.05.2011 leg. J. Halada – Zambia: 90 km W Solwezi, E Chisasa 1♀ 09.09.2005 leg. M. Snížek – Zimbabwe: Mushandike, National Park, Masvingo 3♂♂ 10.12.1998 leg. J. Halada.

New record for the fauna of Ethiopia and Nigeria. *Lithurgus spiniferus* CAMERON is not mentioned as parasitoid in EARDLEY & URBAN (2010: 200).

Genus *Micrapion* KRIECHBAUMER 1894

Description: KRIECHBAUMER 1894: 315.

Typus generis: *Micrapion bilineatum* KRIECHBAUMER 1894.

Distribution: Ethiopian region.

Valid species: 11.

This genus is not mentioned in SCHMIEDEKNECHT (1909).

***Micrapion biimpressum* BOUČEK 1974**

Micrapion biimpressum sp.n.: BOUČEK 1974: 213 (key), 222 (descr. ♂ ♀, Cameroon, Democratic Republic of Congo, Liberia, Nigeria).

Micrapion biimpressum BOUČEK 1974: MEDLER 1980: 458 (cat. Nigeria).

D i s t r i b u t i o n : Cameroon, Central African Republic, Democratic Republic of Congo, Liberia, Nigeria.

M a t e r i a l e x a m i n e d : Central African Republic: 70 km NNE Bangui, 445 m (04°57'N/18°46'E) 1♀ 24.-28.11.2010 leg. J. Halada – 35 km S Kasama, 1250 m (10°30'S/31°12'E) 1♂ 12.12.2009 leg. F. Kantner – 15 km S M Mbaïki, 420 m (03°44'N/18°E) 1♀ 25.12.2008 leg. J. Halada.

New record for the fauna of Central African Republic.

***Micrapion bilineatum* KRIECHBAUMER 1894 (fig. 5)**

Micrapion bilineatum nov.sp.: KRIECHBAUMER 1894: 298 (cat. as *Micrapion bilineolatum*), 316 (descr. ♂, Mozambique).

Micrapion bilineatum KRIECHBAUMER 1894: DE DALLA TORRE 1898: 405 (cat.).

Leucospis bilineatum (KRIECHBAUMER 1894): WELD 1922: 3 (tax.), 4 (tax.), 38 (cat. as *Micrapion bilineatum*).

Micrapion bilineatum KRIECHBAUMER 1894: GAHAN & FAGAN 1923: (tax., cat. typ. gen.).

Micrapion bilineatum KRIECHBAUMER 1894: BOUČEK 1974: 214 (key), 217 (figs 259, 260), 225 (tax., Angola, Democratic Republic of Congo, Kenya, Namibia, South Africa, Tanzania, Zambia, Zimbabwe).

Micrapion bilineatum KRIECHBAUMER 1894: RASPLUS 1987: 183 (tax., Ivory Coast).

**Leucospis nyassica* nov.spec.: ENDERLEIN 1901: 219 (descr. ♀, Tanzania).

Leucospis nyassica ENDERLEIN 1901: WELD 1922: 37 (cat.).

Micrapion nyassica (!) (ENDERLEIN 1901): STEFFAN 1948: 82 (tax.), 84 (key).

Leucospis nyassica ENDERLEIN 1901: BOUČEK 1974: 225 (syn., type design.).

Distribution: Angola, Central African Republic, Democratic Republic of Congo, Ivory Coast, Kenya, Mozambique, Namibia, South Africa, Tanzania, Zambia, Zimbabwe.

Material examined: Central African Republic: 80 km N Kembe (04°29'N/21°53'E) 1 ♀ 16.07.1985 leg. H. Dollfuss – South Africa: W Cape Barrydale 1 ♀ 16.12.2002 leg. M. Snižek.

New record for the fauna of Central African Republic. *Micrapion bilineatum* KRIECHBAUMER and *Leucospis nyassica* ENDERLEIN are not mentioned in SCHMIEDEKNECHT (1909).

***Micrapion clavaforme* STEFFAN 1948 (fig. 6)**

Micrapion clavaforme n.sp.: STEFFAN 1948: 83 (fig. 1e), 84 (key), 85 (descr. ♀, Gabon).

Micrapion clavaforme STEFFAN 1948: BOUČEK 1974: 209 (figs 245, 246), 213 (key), 215 (figs 254-256), 220 (tax., type design., descr. ♂, biol., Cameroon, Democratic Republic of Congo, Ethiopia, Gabon, Ghana, Guinea Bissau, Kenya, Liberia, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Zimbabwe), 231 (host-parasite cat.).

Micrapion clavaforme STEFFAN 1948: MEDLER 1980: 458 (cat. Nigeria).

Micrapion clavaforme STEFFAN 1948: RASPLUS 1987: 174 (tax., biol., Ivory Coast).

Micrapion clavaforme STEFFAN 1948: DALY 1988: 2 (biol.), 53 (biol., Kenya).

Micrapion clavaforme STEFFAN 1948: EARDLEY & URBAN 2010: 383 (host-parasite cat.), 548 (app. 2: parasite cat.).

Host: Apidae: *Ceratina tanganyicensis* STRAND 1911 (DALY 1988: 53; BOUČEK 1974: 221 as *Ceratina* sp.).

Distribution: Benin, Cameroon, Democratic Republic of Congo, Ethiopia, Gabon, Ghana, Guinea Bissau, Ivory Coast, Kenya, Liberia, Malawi, Mozambique, Nigeria, Rwanda, Senegal, Sierra Leone, South Africa, Sudan, Tanzania, Zimbabwe.

Material examined: Benin: Zagnanado, Rivière Ouémé 1 ♂ 15.04.2000 leg. J. Halada – 15 km SE Savé 8 ♂ 2 ♀ 08.-25.04.2000 leg. J. Halada – Ethiopia: Prov. Sidamo 50 km NE Mega, 1420 m 1 ♀ 24.04.2007 leg. J. Halada – Kenya: Taita Hills, Wundanyi 1 ♂ 1 ♀ 18.-22.03.1997 leg. Ma. Halada – Voi, Tsavo 5 ♂ 2 ♀ 22.11.-02.12.1996 leg. Mi. Halada; 1 ♀ 15.04.2004 leg. M. Snižek 2 ♂ 2 ♀ 23.03.-04.04.1997 leg. Ma. Halada – Voi 1 ♂ 10.12.1999 leg. M. Snižek – Malawi: 85 km SE Lilongwe, Dedza 1 ♀ 08.-12.01.2002 leg. J. Halada – Mozambique: Prov. Manica, 35 km SW Chimoio, 700 m (19°08'S/33°09'E) 1 ♂ 14.12.2005 leg. Ma. Halada – 45 km NW Chimololo 1 ♀ 12.-20.12.2003 leg. J. Halada – Tanzania: Utete – Rufiji, Kindwiti 1 ♀ 10.-14.12.1993 leg. M. Snižek – Zimbabwe: Shamva (Bindura) 1 ♀ 17.12.1998 leg. Ma. Halada – Ngezi-Recreation Park, Kwekwe 1 ♀ 01.12.1998 leg. J. Halada – 40 km S Chipinge, Mt. Selinda 2 ♀ 13.12.1998 leg. J. Halada.

New record for the fauna of Benin and Malawi.

***Micrapion congoense* STEFFAN 1948**

Micrapion congoense n.sp.: STEFFAN 1948: 84 (key), 85 (descr. ♀, Democratic Republic of Congo).

Micrapion congoense STEFFAN 1948: BOUČEK 1974: 214 (key), 217 (figs 261-263), 224 (tax. as *Micrapion congoense*, Democratic Republic of Congo, Mozambique, Uganda).

D i s t r i b u t i o n : Democratic Republic of Congo, Mozambique, Uganda.

M a t e r i a l e x a m i n e d : Uganda: near Mubende 1 ♀ 19.-22.11.2001 leg. M. Snižek.

***Micrapion dalyi* BOUČEK 1974**

Micrapion dalyi sp.n.: BOUČEK 1974: 213 (key), 215 (figs 257, 258), 218 (descr. ♀, biol., Kenya), 231 (host-parasite cat.).

Micrapion dalyi BOUČEK 1974: DALY 1988: 2 (biol.),

Micrapion dalyi BOUČEK 1974: EARDLEY & URBAN 2010: 383 (host-parasite cat.), 548 (app. 2: parasite cat.).

H o s t : Apidae: *Ceratina tanganyicensis* STRAND 1911 (DALY 1988: 53; BOUČEK 1974: 219 as *Ceratina* sp.).

D i s t r i b u t i o n : Kenya, Namibia.

M a t e r i a l e x a m i n e d : Kenya: Voi, Tsavo, 1 ♀ 23.3.-04.04.1997 leg. Ma. Halada – Namibia: Rundu 1 ♀ 19.01.1993 leg. J. Gusenleitner.

New record for the fauna of Namibia.

***Micrapion dolichum* BOUČEK 1974**

Micrapion dolichum sp.n.: BOUČEK 1974: 213 (key), 214 (descr. ♀, South Africa, Zimbabwe), 215 (figs 249, 250).

D i s t r i b u t i o n : South Africa, Zimbabwe.

***Micrapion lugubre* BOUČEK 1974**

Micrapion lugubre sp.n.: BOUČEK 1974: 213 (key), 215 (figs 251, 252), 216 (descr. ♀, Democratic Republic of Congo).

D i s t r i b u t i o n : Democratic Republic of Congo.

***Micrapion nasutum* BOUČEK 1974**

Micrapion nasutum sp.n.: BOUČEK 1974: 214 (key), 217 (fig. 266), 224 (descr. ♂ ♀, biol., Kenya, Tanzania), 231 (host-parasite cat.).

Micrapion nasutum BOUČEK 1974: DALY 1988: 2 (biol.), 35 (biol., Kenya), 36 (biol., Tanzania).

Micrapion nasutum BOUČEK 1974: EARDLEY & URBAN 2010: 379 (host-parasite cat.), 548 (app. 2: parasite cat.).

H o s t : Apidae: *Ceratina pennicillata* FRIESE 1905 (DALY 1988: 35, 36; BOUČEK 1974: 225 as *Ceratina* sp.).

D i s t r i b u t i o n : Kenya, Tanzania.

***Micrapion punctulatum* BOUČEK 1974**

Micrapion punctulatum sp.n.: BOUČEK 1974: 213 (key), 215 (fig. 253), 221 (descr. ♀, Nigeria).

Micrapion punctulatum BOUČEK 1974: MEDLER 1980: 458 (cat. Nigeria).

D i s t r i b u t i o n : Nigeria.

***Micrapion richardsi* BOUČEK 1974**

Micrapion richardsi sp.n.: BOUČEK 1974: 214 (key), 217 (figs 264, 265), 223 (descr. ♂ ♀, biol., Ghana), 231 (host-parasite cat.).

H o s t : Apidae: *Ceratina* sp. (BOUČEK 1974: 223).

D i s t r i b u t i o n : Ghana.

***Micrapion steffani* BOUČEK 1974**

Micrapion steffani sp.n.: BOUČEK 1974: 13 (fig. 15), 212 (key), 217 (figs 267-269), 226 (descr. ♂ ♀, biol., South Africa), 231 (host-parasite cat.).

H o s t : Apidae: *Ceratina truncata* FRIESE 1905 (BOUČEK (1974: 228).

D i s t r i b u t i o n : South Africa.

Micrapion steffani BOUČEK is not mentioned as parasitoid in EARDLEY & URBAN (2010: 383).

Genus *Neleucospis* BOUČEK 1974

Description: BOUČEK 1974: 210.

Typus generis: *Neleucospis masculina* BOUČEK 1974.

Distribution: Ethiopian region.

Valid species: 1.

***Neleucospis masculina* BOUČEK 1974**

Neleucospis masculina sp.n.: BOUČEK 1974: 210 (typ. gen.), 211 (descr. ♀, Sierra Leone).

Neleucospis masculina BOUČEK 1974: MEDLER 1980: 458 (cat. Nigeria).

Neleucospis masculina BOUČEK 1974: RASPLUS 1987: 174 (tax., type design., descr. ♂, fig. 2, biol., Ivory Coast).

H o s t : Crabronidae: *Pison* sp. (RASPLUS 1984:175).

D i s t r i b u t i o n : Ivory Coast, Nigeria, Sierra Leone.

Doubtful taxa

***Leucospis* aff. *namibica* BOUČEK 1974**

Leucospis aff.*namibica* BOUČEK 1974: SCHMID-EGGER 2010: 321 (tax., Botswana).

D i s t r i b u t i o n : Botswana.

The identification is uncertain (SCHMID-EGGER 2010: 321).

***Leucospis* ? *ornata* WESTWOOD 1839**

Leucospis ? *ornata* WESTWOOD 1839: SMITH 1862 (In: ANONYMOUS): 31 (biol., South Africa).

Leucospis ornata WESTWOOD 1839: DE DALLA TORRE 1898: 413 (cat. partim).

H o s t : Megachilidae: *Anthidium* sp. (SMITH 1862 (In: ANONYMOUS): 31).

D i s t r i b u t i o n : South Africa.

The identification is uncertain. The material is apparently lost, because it is not cited in BOUČEK (1974: 118).

***Micrapion* sp.**

Micrapion sp. A: BOUČEK 1974: 217 (figs 270-272), 228 (descr. ♂ ♀, Namibia, South Africa).

D i s t r i b u t i o n : Namibia, South Africa

This taxon is near *Micrapion steffani* BOUČEK 1974 (BOUČEK 1974: 228).

Acknowledgements

We thank Fritz Gusenleitner (Biologiezentrum der Oberösterreichischen Landesmuseen Linz, Austria) for making available unidentified material and Manuela Vizek (Naturhistorisches Museum Wien, Austria), who supported our study in various ways.

Zusammenfassung

Die Familie Leucospidae ist in der äthiopischen Faunenregion, ausgenommen Madagassis, mit 29 Arten aus drei Gattungen vertreten: *Leucospis* FABRICIUS 1775 (17 Arten), *Micrapion* KRIECHBAUMER 1894 (11 Arten) und *Neleucospis* BOUČEK 1974 (eine Art). Ein Artenkatalog der äthiopischen Faunenregion, ausgenommen Madagassis, wurde erstellt. Die Funddaten aller im Biologiezentrum der Oberösterreichischen Landesmuseen in Linz (Österreich) aufbewahrten Taxa, das sind sieben Arten der Gattung *Leucospis* FABRICIUS und fünf Arten der Gattung *Micrapion* KRIECHBAUMER, werden angeführt. Nachweise von folgenden Ländern werden mitgeteilt: Äthiopien, Benin, Kenia, Malawi, Mosambique, Namibia, Nigeria, Republik Guinea, Sambia, Simbabwe, Südafrika, Tansania, Zentralafrikanische Republik.

References

References, in which Leucospidae are not identified to species level, are marked with an asterisk (*).

ANONYMOUS (1862): January 6, 1861. — Proceedings of the Entomological Society of London **1861**: 30-35.

BOUČEK Z. (1959): A revised key to the West-Palearctic species of *Leucospis* (Hym., Chalc.), with some new synonymy. — Acta Entomologica Musei Nationalis Pragae **33** (562): 435-444.

BOUČEK Z. (1974): A Revision of the Leucospidae (Hymenoptera: Chalcidoidea) of the World. — Bulletin of the British Museum (Natural History), Entomology, Supplement **23**: 241 pp.

BRAUNS H. (1926): V. Nachtrag zu "FRIESE, Bienen Afrikas. — Zoologische Jahrbücher, Abteilung für Systematik, Geographie und Biologie der Tiere **52** (2-3): 187-230, pl. 5.

CAMERON P. (1907): Descriptions of Species of Parasitic Hymenoptera, chiefly in the Collection of the South African Museum, Cape Town. (Second Paper). — Annals of the South African Museum **5** (4): 203-225.

CAMERON P. (1909): A contribution to the knowledge of the Parasitic Hymenoptera of Argentina. — Transactions of the American Entomological Society **35**: 419-450.

DALLA TORRE C.G. DE (1898): Catalogus Hymenopterorum hucusque descriptorum systematicus et synonymicus Volumen V: Chalcididae et Proctotrupidae. — Leipzig (Wilhelm ENGELMANN): 598 pp.

- DALY H.V. (1988): Bees of the New Genus *Ctenoceratina* in Africa South of the Sahara (Hymenoptera, Apoidea). — University of California Publications in Entomology **108**: 69 pp.
- DARLING D.C. & S. CARDINAL (2005): The world species-groups of *Leucospis* (Hymenoptera: Leucospidae) – thirty years later. — Acta Societas Zoologicae Bohemicae **69** (1-2): 49-64.
- EARDLEY C. & R. URBAN (2010): Catalogue of Afrotropical bees (Hymenoptera: Apoidea: Apiformis). — Zootaxa **2455**: 548 pp.
- ENDERLEIN G. (1901): Neue Evaniiden, Stephaniden, Mutilliden (Apterogyna), Proctotrupiden und Chalcididen, mit einer Bestimmungstabelle der afrikanischen Stephaniden. Aus dem Kgl. Zoologischen Museum zu Berlin. — Archiv für Naturgeschichte **67** (1, 3): 177-220.
- ENDERLEIN G. (1902): Über eine von Dr. FÜLLEBORN am Nyassasee entdeckte neue Leucospidae. — In: ENDERLEIN G. (ed.), Ergebnisse der Nyassasee- und Kingagebirgs-Expedition der Heckmann-Wentzelstiftung. Zur Kenntnis der Insekten Deutsch-Ostafrikas. — Mitteilungen aus dem Zoologischen Museum in Berlin **2** (2): 17-18.
- GAHAN A.B. & M.M. FAGAN (1923): The type species of the genera of Chalcidoidea or Chalcid-flies. — Bulletin of the United States National Museum **124**: 173 pp.
- GESS F.W. (1981): Some aspects of an ethological study of the aculeate wasps and the bees of a karroid area in the vicinity of Grahamstown, South Africa. — Annals of the Cape Provincial Museums, Natural History **14** (1): 1-80.
- KIRBY W.F. (1883): Remarks on the Genera of the Subfamily Chalcidinae, with Synonymic Notes and Descriptions of new Species of Leucospidae and Chalcidinae. — Journal of the Linnean Society of London, Zoology **17** (98): 53-78, pls 3, 4.
- KIRBY W.F. (1900): Expedition to Sokotra XII: Descriptions of the New Species of Hymenoptera. — Bulletin of the Liverpool Museums **3** (1): 13-24.
- KIRBY W.F. (1903): Arthropoda. Insecta: Hymenoptera. — In: FORBES H.O. (ed.), The Natural History of Sokotra and Abd-El-Kuri: 233-260, pls 15, 16.
- KLUG F.F. (1834): Symbolae physicae, seu icones et descriptiones insectorum, quae in itinere per Africam borealem et Asiam occidentalem Friderici Guilelmi HEMPRICH et Christiani Godofredi EHRENBURG, studio, novae aut illustratae redierunt. Pars Zoologica. Insecta. 4. — Berlin (G. REIMER): pls 31-40.
- KOHL F.F. (1906): Zoologische Ergebnisse der Expedition der kaiserlichen Akademie der Wissenschaften nach Südarabien und Sokótra im Jahre 1898-1899. Hymenopteren. — Denkschriften der Kaiserlichen Akademie der Wissenschaften Wien, Mathematisch-naturwissenschaftlichen Klasse **71**: 169-301.
- KRIECHBAUMER J. (1894): Hymenoptera ichneumonidea a medico nautico Dr. Joh. BRAUNS in itinere secundo ad oras Africa lecta. — Berliner Entomologische Zeitschrift **39** (2): 297-318.
- MEDLER J.T. (1980): Insects of Nigeria – Checklist and Bibliography. — Memoirs of the American Entomological Institute **30**: I-VII, 919 pp.
- *MUNRO J.B., HERATY J.M., BURKS R.A., HAWKS D., MOTTERN J., CRUAUD A., RASPLUS J.-Y. & P. JANSTA (2011): A Molecular Phylogeny of the Chalcidoidea (Hymenoptera) — PLoS One **6** (11): e27023.doi:10.1371/journal.pone.00227023.
- RASPLUS J.-Y. (1987): Leucospidae récoltés à Lamto (Cote d'Ivoire). Descriptions des mâles de *Leucospis reversa* BOUČEK et *Neleucospis masculina* BOUČEK. — Revue Française d'Entomologie, Nouvelle Série **9** (4): 172-175.
- SCHLETTERER A. (1890): Die Gruppe der Hymenopteren-Gattungen *Leucospis* FABR., *Polistomorpha* WESTW. und *Marres* WALK. — Berliner Entomologische Zeitschrift **35** (2): 141-302.

- SCHLETTERER A. (1891): Hymenoptera in expeditione sub auspicio regii imperii belgici perfecta in regione Africa ad Congo flumen inferius collecta. — *Annales de la Société Entomologique de Belgique* **35**: 1-36.
- SCHMID-EGGER C. (2010): Order Hymenoptera, Family Leucospidae. — *Arthropod Fauna of UAE* **3**: 319-324.
- SCHMIEDEKNECHT O. (1909): Hymenoptera Fam. Chalcididae. — In: WYTSMAN P. (ed.), *Genera Insectorum* **97**: 550 pp.
- SCHULTHESS-SCHINDLER A. de (1899): La faune entomologique du Delagoa. Hymenoptères. — *Bulletin de la Société Vaudoise des Sciences Naturelles* **35** (132): 249-277.
- SCHULZ W.A. (1906): Die Hymenopteren der Insel Fernando Poo. — In: SCHULZ W.A., *Spolia Hymenopterologica*: 270-297.
- STEFFAN J.R. (1948): Le genre *Micrapion* KRIECHB (Hym. Chalcididae). Description de trois espèces nouvelles. — *Bulletin de la Société Entomologique de France* **53** (6): 81-88.
- WEAVING A.J.S. (1994a): Notes on nesting behaviour in two Afrotropical euploine wasps *Auplopus vitripennis* SMITH and *A. femoralis* (ARNOLD) (Hymenoptera: Pompilidae) — *Entomologist* **113** (2): 140-153.
- WEAVING A.J.S. (1994b): Nesting behaviour in three Afrotropical trap-nesting wasps, *Chalybion laevigatum* (KOHL), *Proepipona meadewaldoi* BEQUAERT and *Tricarinodeyerus guerinii* (SAUSSURE) (Hymenoptera: Sphecidae, Eumenidae). — *Entomologist* **113** (3-4): 183-197.
- WEAVING A.J.S. (1995): A comparison of nesting success and nesting habits in some Afrotropical aculeate wasps, with particular reference to nest parasites (Hymenoptera: Sphecidae, Eumenidae). — *Annals of the Cape Provincial Museums (Natural History)* **19** (4): 181-224.
- WELD C.J. (1922): Studies on Chalcid-flies. — *Proceedings of the U.S. National Museum* **61** (6): 43 pp., pls 1-4.
- WESTWOOD J.O. (1839): Die Hymenopteren-Gattung *Leucospis*, monographisch behandelt. — *Zeitschrift für Entomologie* **1** (2): 237-266, pls 3, 4.
- WALKER F. (1871): Notes on Chalcididae. Part IV: Chalcididae, Leucospidae, Agaonidae, Eucharidae, Perilampidae, Ormyridae, Encyrtidae. — London (E.W. JANSON): 55-70.

Authors' addresses:

Michael MADL
Internationales Institut für Entomologie
Naturhistorisches Museum
Burgring 7
1010 Wien, Austria
E-mail: michael.madl@nhm-wien.ac.at

Martin SCHWARZ
Eben 21
4202 Kirchschlag, Austria
E-mail: schwarz-entomologie@aon.at



Fig. 1-6: (1) *Leucospis carinifera* KRIECHBAUMER 1894; (2) *Leucospis reversa* BOUČEK 1974; (3) *Leucospis tricolor* KIRBY 1883; (4) *Leucospis varicollis* CAMERON 1909; (5) *Micrapion bilineatum* KRIECHBAUMER 1894; (6) *Micrapion clavaforme* STEFFAN 1948.